

ELECTRIC DUMP TRUCK BELAZ

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One of the latest developments of the BELAZ automobile plant is the 7558E model, which runs entirely on electricity without an internal combustion engine. In heavy critical areas, the machine will move, powered by power lines. In the face and in the dump, the machine will operate on battery traction.

A new promising development – the BELAZ-7558E electric dump truck weighing 76 tons has a carrying capacity of 90 tons developed on the basis of a serial dump truck from the BELAZ-7558 family. Its maximum speed reaches 64 km/h. The total power of 15 lithium-ion batteries is 675 kWh. The estimated range of the electric dump truck is 2 hours with a load of 90 tons and driving uphill on a 10 % slope. Recharging the battery takes 20–25 minutes. BELAZ was one of the first to manufacture an electric dump truck of this class. The car has practically no competitors. The machine provides lower operating costs: no diesel costs, reduced maintenance costs and increased productivity. The cost of transporting a ton of cargo is much lower than in traditional diesel transport. According to preliminary estimates, savings when using a battery-powered vehicle compared to a BELAZ serial dump truck of the same carrying capacity over 10 years of operation can be about \$1 million. In addition, the environmental situation in the places where such equipment is used is improving.

A prototype of the newest BELAZ-7558E electric dump truck was presented in Zhodino for the first time during the grand opening of the test site for diesel trolley trucks. Tests of the electric 90-tonner should be completed in 2022, and in 2023 the start of its mass production is scheduled. It should be pointed out that JSC "BELAZ" is the world's largest manufacturer of dump trucks and transport equipment for the mining and construction industries. It occupies about 30 % of the world market of extra-heavy-duty dump trucks and produces the world's largest mining truck with a payload capacity of 450 tons.